

JPRS 78383

25 June 1981

# USSR Report

TRANSPORTATION

No. 49

**FBIS** FOREIGN BROADCAST INFORMATION SERVICE

#### NOTE

JPRS publications contain information primarily from foreign newspapers, periodicals and books, but also from news agency transmissions and broadcasts. Materials from foreign-language sources are translated; those from English-language sources are transcribed or reprinted, with the original phrasing and other characteristics retained.

Headlines, editorial reports, and material enclosed in brackets [] are supplied by JPRS. Processing indicators such as [Text] or [Excerpt] in the first line of each item, or following the last line of a brief, indicate how the original information was processed. Where no processing indicator is given, the information was summarized or extracted.

Unfamiliar names rendered phonetically or transliterated are enclosed in parentheses. Words or names preceded by a question mark and enclosed in parentheses were not clear in the original but have been supplied as appropriate in context. Other unattributed parenthetical notes within the body of an item originate with the source. Times within items are as given by source.

The contents of this publication in no way represent the policies, views or attitudes of the U.S. Government.

#### PROCUREMENT OF PUBLICATIONS

JPRS publications may be ordered from the National Technical Information Service (NTIS), Springfield, Virginia 22161. In ordering, it is recommended that the JPRS number, title, date and author, if applicable, of publication be cited.

Current JPRS publications are announced in Government Reports Announcements issued semimonthly by the NTIS, and are listed in the Monthly Catalog of U.S. Government Publications issued by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

Indexes to this report (by keyword, author, personal names, title and series) are available through Bell & Howell, Old Mansfield Road, Wooster, Ohio, 44691.

Correspondence pertaining to matters other than procurement may be addressed to Joint Publications Research Service, 1000 North Glebe Road, Arlington, Virginia 22201.

Soviet books and journal articles displaying a copyright notice are reproduced and sold by NTIS with permission of the copyright agency of the Soviet Union. Permission for further reproduction must be obtained from copyright owner.

25 June 1981

# USSR REPORT TRANSPORTATION

No. 49

## CONTENTS

### MOTOR VEHICLE

- New System for Administration of RSFSR's Roads  
(I. S. Gvozdev; AVTOMOBIL' N YE DOROGI, No 2, 1981)..... 1
- Rural Road Construction in Nonchernozem Zone  
(V. Kostylev; SEL'SKAYA ZHIZN', 31 May 81)..... 4

### RAILROAD

- Cosensab Official Suggests Measures To Improve Railroad Transport  
(A. Kovalenko; MATERIAL'NO-TEKHNICHESKOYE SNABZHENIYE,  
No 2, 1981)..... 7
- Importance of Quality Transport Stressed  
(M. Trikhunkov; GUDOK, 9 Apr 81)..... 14
- Advances Noted in Machine-Building for the Railroads  
(EKONOMICHESKAYA GAZETA, Apr 81)..... 17
- More Efficient Transport of Short Hauls Urged  
(V. Krylov; EKONOMICHESKAYA GAZETA, Apr 81)..... 22

### OCEAN AND RIVER

- Increase Freight Shipments by Joint Rail and Water Transport  
(V. Marinichenko; RECHNOY TRANSPORT, May 81)..... 25

MISCELLANEOUS

Progress in Experimental Cableway Construction Hailed (A. Bezhanishvili; ZARYA VOSTOKA, 21 Apr 81).....	28
Development of New Pneumatic Conveyer Reported (A. Mitagvariya; ZARYA VOSTOKA, 5 Apr 81).....	31

## MOTOR VEHICLE

UDC 625.7:658(470)

### NEW SYSTEM FOR ADMINISTRATION OF RSFSR'S ROADS

Moscow AVTOMOBIL'NYYE DOROGI in Russian No 2, 1981 p 6

[Article by Deputy Chief of the Administration of Labor and Wages of the RSFSR Ministry of Roads I. S. Gvozdev: "The New Structure of the Management of RSFSR Road Building and Maintenance in Action"]

[Text] The RSFSR Ministry of Roads has completed the changeover of road organizations to the new structure of the management of road building and maintenance.

According to the new arrangement the oblast production administrations of the construction and utilization of roads, the roads and the administrations of construction are being transformed from a middle level of management into a local production enterprise (organization) with the rights of a socialist state production enterprise, while its local subdivisions (road construction administrations, road maintenance and construction administrations, PDU's, road administrations, LUAD's) are being transformed into production units based on internal cost accounting. Moreover, the road administrations, the PDU's and LUAD's are being reorganized from budget-carried road utilization organizations into cost accounting road maintenance and construction administrations (sections of the performer of the work).

The administrations of roads are being reorganized from budget-carried administrations into cost accounting administrations (with the rights of maintenance and construction trusts).

The main principle of the creation of road maintenance and construction organizations is maintained--there should be one maintenance organization in each rayon.

The wage groups of managers and engineering and technical personnel of roads and road maintenance and construction administration are established in accordance with the indicators of construction organizations subject to the amounts of work on new construction, capital and medium repair, while for road maintenance and construction administration, moreover, the current repair and maintenance of roads are taken into account.

The administration of roads, the road and the administration of construction, to which production associations that are not independent enterprises belong, operate in conformity with the Statute on the Socialist State Production Enterprise.



The administration of roads, the road and the administration of construction, to which production associations that are not independent belong and to which independent enterprises (organizations)--administrations for the supply of complete sets of production equipment, design offices, planning estimate bureaus, plants, quarries, road construction administrations and road maintenance and construction administrations with a volume of work in excess of 5 million rubles (with allowance made for correction factors)--are at the same time subordinate, exercise with respect to the former and with respect to the production activity performed by the administration of roads, the road and the administration of construction themselves the rights and duties of a production enterprise in conformity with the Statute on the Socialist State Production Enterprise, while with respect to the independent organizations subordinate to them they act as an organ of economic management.

Now the administration of roads, the road and the administration of construction create for themselves a fund in conformity with Paragraph 83 of the Statute on the Socialist State Enterprise and establish the raises for highly skilled foremen and other engineering and technical personnel of the production units and the managerial staff. The creation of such a fund is accomplished from the planned wage fund of the production units and managerial staff in the amount of up to 0.3 percent (the amount of up to 0.3 percent is established by the republic association).

The raises for the chiefs, chief engineers and deputy chiefs of the administration of roads, the road and the administration of construction cannot be established either by the administration of roads, the road and the administration of construction themselves or by the republic association.

At independent cost accounting organizations, with respect to which the administration of roads, the road or the administration of construction is the organ of economic management, such a fund is created from the planned fund of these organizations in the amount of up to 0.3 percent (it is established by the administration of roads, the road, the administration of construction), and the raises for foremen and other technical and engineering personnel are established by the managers of these organizations.

With the introduction of the new structure of management some functions of the staff of the administration of roads, the road and the administration of construction are centralized. This especially pertains to the work of the accounting office, the planning division and other subdivisions. In this connection the staff of such subdivisions is increased by 1-3 units by means of the reduction of the number in the production subdivisions. Their functions will be specified in the future.

In connection with the introduction of the new management structure considerable work has been done on the streamlining of the manning tables of the staff of the administration of roads, the road, the administration of construction and their subdivisions (scientific research stations, POR's, laboratories, computer bureaus, communications centers and others). Whereas the manning tables of the administrations of roads, the roads and the administrations of construction are approved by the ministry, the staffs of the scientific research stations, the POR's, the laboratories, as well as road construction administrations and road maintenance and construction administrations with a volume of work in excess of 5 million rubles are approved by the republic association.

The right to approve the manning tables of the computer bureaus is granted to the administration of roads, the road and the administration of construction within the standards of the number of personnel, which have been approved for them.

A decrease of the number of administrative and managerial personnel has been achieved as a result of the introduction of the new management structure. The economic impact was more than 9 million rubles.

COPYRIGHT: Izdatel'stvo "Transport", "Avtomobil'nyye dorogi", 1981

7807

CSO: 1829/269

## MOTOR VEHICLE

### RURAL ROAD CONSTRUCTION IN NONCHERNOZEM ZONE

Moscow SEL'SKAYA ZHIZN' in Russian 31 May 81 p 2

[Article by V. Kostylev, chief of the Republic Association for the Construction and Utilization of Roads of the Nonchernozem Zone of the RSFSR: "Road to the Village"]

[Text] In the system of measures aimed at the development of agriculture of the Nonchernozem Zone of the RSFSR the construction of roads occupies a special place. Significant changes in this matter are being felt in each of the 29 oblasts and autonomous republics of the region. In the past 5-year period the organizations of the RSFSR Ministry of Roads alone have linked here by roads 3,000 livestock complexes with central farmsteads and departments, 1,671 kolkhozes and sovkhoses with rayon centers and railroad stations, 46 remote rayon centers with oblast cities and capitals of the autonomous republics. But although in 1976-1980 5,000 km of roads were built in the Nonchernozem Zone in excess of the state plan, a high rate of their construction was not achieved everywhere.

In solving the problems of the new five-year plan, we have to not only overcome these shortcomings, but also reach the level specified by the decree of the CPSU Central Committee and the USSR Council of Ministers "On the Further Development and Increase of the Efficiency of Agriculture of the Nonchernozem Zone of the RSFSR in 1981-1985." Now it is envisaged here to build and renovate 38,300 km of roads, including 20,000 km of public roads and 18,300 km of intrafarm roads. This is 10,000 km more than during the 10th Five-Year Plan.

About 5 billion rubles of capital investments are being allocated for the development of the road management of the zone. The assimilation of this capital will make it possible to connect more than 1,200 central farmsteads of kolkhozes and sovkhoses with rayon centers and railroad stations, nearly 40 remote rayon centers with oblast centers and capitals of the autonomous republics.

Not only the quantitative, but also the qualitative indicators of the work of the road workers are improving. All the republic and oblast highways, as well as more than half of the local roads will be built with cement concrete and asphalt concrete surfaces. In the rayons, where they are experiencing difficulties with the production of stone or with its shipment by railroad, it is planned to build the beds of roads from local gravel materials and soils, which have been reinforced with concrete.



Much has to be done on the building of bridges. Large permanent bridges will be built over the Vyatka River at Buyskiy Perevoz in Kirovskaya Oblast, the Vetluga and Vokhma in Kostromskaya Oblast, the Oka and Moksha in Ryazanskaya Oblast and the Sura in the Chuvashskaya ASSR.

But even with the complete implementation of the program a portion of the population centers will remain without hard-surfaced access roads. Additional efforts of the local soviets, road organizations and the farms themselves, which are aimed at increasing the amounts of road construction by means of internal resources, are needed in Arkhangel'skaya, Vologodskaya, Kirovskaya and other oblasts.

In this connection the initiative of the party and soviet organs of Kostromskaya Oblast, which are actively enlisting in the important matter the representatives of oblast departments--such as the Kostromales Combine, the Kostromaenergo Administration, the administration of reclamation and water resources and others--merits attention. By means of their capital investments and direct participation in the construction during the 11th Five-Year Plan 300 km more roads will be built throughout the oblast than is stipulated by the decree of the CPSU Central Committee and the USSR Council of Ministers. This will make it possible to unite all the rayon centers, including the remote centers, and practically all the central farmsteads of kolkhozes and sovkhozes by hard-surfaced roads.

The solution of the road problem in the Nonchernozem Zone also requires the more purposeful work of construction ministries and departments. Meanwhile many administrations of the ministries of rural and industrial construction, power and electrification and a number of others engage extremely reluctantly in the laying of roads even to the projects, the construction of which is under way. As a result the forces of the local road workers to the detriment of the village are being enlisted in the construction of roads in the zone of industrial giants under construction. That was the case with the construction of the Cheborsarskaya GES, the Surgut-Polotsk petroleum pipeline, the gas pipeline in Vologodskaya Oblast and the Gubakha Chemical Combine in Permskaya Oblast.

But the Main Administration of Construction in the Oka River Area of the USSR Ministry of Industrial Construction is approaching the matter in a different way. It has within it a well-equipped, specialized trust which is carrying out the construction of roads and access roads in the zones of industrial construction. A large contribution of the Main Administration of Construction in the Oka River Area lies in the fact that Tul'skaya Oblast with respect to the availability of hard-surfaced roads occupies one of the leading places in the Nonchernozem Zone. It seems that it is also time for other territorial administrations of construction, which operate in the Nonchernozem Zone, to think about setting up within themselves such specialized subdivisions.

Roskolkhozstroyob'yedineniye has substantial reserves for expanding the construction of motor routes. During the 10th Five-Year Plan it received much new road equipment and vehicles. However, labor productivity in the road subdivisions of this association is 15-20 percent lower than in the RSFSR Ministry of Roads, while in individual oblasts this difference is even greater.

There is also a need to think about the design of rural roads for the Nonchernozem Zone. A peculiarity of them is the fact that the "peak" loads arise here at the

most unfavorable time--in spring and autumn. Precisely at this time the traffic of heavy tractors and other agricultural equipment becomes especially heavy. That is why it is so important for RSFSR Gosstroy and the RSFSR Ministry of Agriculture with the enlistment of scientific institutes to approve new specifications for rural roads.

The factor of seasonality should also be taken into account to a greater extent when providing road organizations with motor transport. The enterprises of the RSFSR Ministry of Motor Transport annually transport to the Nonchernozem Zone for road construction 100 million tons of cargo. Now not only a simple increase of the volumes of cargo to 150-170 million tons, but also the regular delivery of vehicles depending on the season will be required. For we need the largest number of machines in the summer, at the height of construction. However, annually in July-September the vehicles leave for other jobs, which affects the productivity of excavators, loaders and other equipment.

For the zone as a whole our equipment is used 10-11 hours a day, while in Mordovia it is used 14 hours. These indicators improve annually. However, there are many obsolete machines, vehicles and equipment at our farms, while those allocated by planning organs in exchange of those written off in their production indicators are not equal to the ones being replaced. The road workers are receiving very few bulldozers and scrapers for T-130 tractors, self-propelled scrapers and truck cranes with a lifting capacity of 16-25 tons. The expansion of the quarry service is being checked due to the shortage of heavy-duty electric excavators.

Taking into account the special-purpose, comprehensive direction of the development of agriculture of the Nonchernozem Zone of the RSFSR and the well-known difficulties with the regular labor force, we consider it expedient to envisage for the road organizations of the Nonchernozem Zone the special-purpose allocation of exceptionally highly productive machinery.

Given the increasing capital investments in the construction of roads, it is important to use these assets more effectively. It seems that it is useful for the road and agricultural organizations jointly with the local soviets to examine once again the title lists of the routes being laid from the standpoint of not only their recovery, but also their direct influence on the efficiency of agricultural production. The acceleration of the elaboration of diagrams of the rayon-by-rayon layout of intrafarm roads and the limitation of the assets for road construction to those rayons where there diagrams have not been elaborated will promote such an approach to the matter.

The lack of a service for the utilization of intrafarm roads, which threatens great losses, also causes alarm. This question was examined last year by the Transportation and Communications Commission of the RSFSR Supreme Soviet. The appropriate recommendations were issued to the RSFSR Ministry of Agriculture and RSFSR Gosplan. Nevertheless the resources necessary for this purpose were never allocated.

The quickest possible solution of this and a number of other problems connected with the provision of the Nonchernozem Zone with reliable motor routes will enable the collectives of our association to fulfill successfully the obligations assumed for the five-year plan.

7807  
CSO: 1824/272

## RAILROAD

### GOSSNAB OFFICIAL SUGGESTS MEASURES TO IMPROVE RAILROAD TRANSPORT

Moscow MATERIAL'NO-TEKHNICHESKOYE SNABZHENIYE in Russian No 2, 1981 pp 15-20

[Article by A. Kovalenko, chief of a division of the transport administration of Gossnab USSR: "On the Basis of Optimum Distribution Plans"]

[Excerpt] To provide for further improvement of the transport work, to eliminate cross hauls and unnecessary long-distance and other inefficient shipments of freight, to reduce transport costs, and to cut down the proportionate expenditure of resources for the transportation of freight and passengers.

From the draft of "Basic  
Directions of the Economic and  
Social Development of the USSR  
in the 1981-1985 Period and in  
the Period up to 1990"

In the 10th Five-Year Plan transport operated with great intensity. The volume of shipments increased by 150 billion ton-kilometers. There continue to be difficulties in maintaining the flow of railroad cars. This is why there is need for more vigorous and effective measures for improvement of the entire system of planning of freight shipments and control of the transport process. We must eliminate the economically undesirable transport and economic relations between the consumers and the supplier and we must implement a long-range program for improvement of the disposition of production and consumption.

These factors are engendering an immeasurable growth in the role and responsibility of the material and technical supply organs and particularly the Soyuzglavsnab'sbyty [Union main administrations of supply and sales] in the regulation of the economic relations between the manufacturing and consumer enterprises. When they have at hand the data on the volume of the shipments, the Soyuzglavsnab'sbyt's are capable of exerting an active influence on the compilation of optimum plans of deliveries in light of the size of the shipments, the time periods, and the types of transport.

The optimum plans for distribution as compiled in close cooperation with the Gossnab's of the Union republics and the main territorial administrations must



become the basis for the drawing up of the shipment plans. As it is now, the transport organizations are making no practical use of the optimum plans. In their opinion, the economic relations between the consumers and the suppliers should be based on the schemes of normal routing of the freight traffic as worked out and approved by the MPS [Ministry of Railways] and the pertinent freight shipment ministry or Soyuzglavnabst. But in the first place, the scheme is still just a scheme and it reflects only the overall picture of the routing of the freight traffic. Secondly, it was compiled on the basis of obsolete data and, of course, does not take into account the present-day changed volume of production and consumption.

As a rule, the optimum plan is drawn up for the quarter and for the year. It is compiled on the basis of concrete figures and is designed for specific shippers and recipients. The plan is rather detailed. It serves the basic requirement of the railroad people--the maintenance of minimal operation of the railroads in ton-kilometers.

Thus, though not gainsaying the value of the freight traffic schemes now in effect (and there are already more than 300 of them), it seems more desirable to retain for the material and technical supply organs the right to make a final determination and decision on what, to where, when, from where and in what quantities and within what time limits deliveries should be made with minimum costs. For a number of types of freight it will probably be desirable to continue in the future to work out schemes (routings) of freight traffic. But in respect to shipments of critical types of freight the optimum plan of assignment must still predominate.

The current optimized deployment plans, which were compiled with the help of EVM [electronic computers] in 17 Soyuzglavnabst's, include 725 million tons of output of the production and technical category. This is 225 million more than the comparable figures at the beginning of the five-year plan. In the 11th Five-Year Plan the output coming under these estimates will reach one billion tons. Of these 50 percent of the freight is distributed by the USSR Gossnab system.

Further optimization of the transport and economic relations requires an expansion of the list of the products which were counted erroneously, more effective practical use of the optimum plans of distribution, and further development and introduction of the scientific and methodological findings. It is essential that work be developed along these lines by the Soyuzglavmetall [Main Administration for Interrepublic Deliveries of Metal Products], the Soyuzglavles [Main Administration for Interrepublic Deliveries of Timber], the Soyuzglavtrubsnabst [Main Administration for Interrepublic Supply and Sales of Pipe] and several other main administrations which distribute the most important types of output but are very slow in enlarging the list of products to be subjected to EVM calculations when compiling the plans for distribution.

At the same time, it is essential to significantly step up the operational discipline and responsibility in the main administrations with a view to eliminating the still recurring unwarranted changes in the distribution plans and the substandard preparation of initial information based in a number of instances on the data of past years and not the data of the period of the plan. When changes are made in the production and consumption plans, corrections must promptly be made in

the plans and they must be brought to the attention of the appropriate organizations. Finally, there must be set up an effective system of control over the compliance of the actual economic links approved by the optimum plan.

The complexity of the work is due to the fact that the organs of material and technical supply are optimizing the transport and economic relations in the context of a deployment of the industrial enterprises which has evolved over a period of many years. As it is, that which was formerly considered the norm is now, in the drastically changed circumstances of the rapid development of entire regions, at variance with the interests of both transport and often the national economy as a whole. In light of the above we are again concentrating our attention on the need for a comprehensive solution of the problem of deployment of the productive forces and the transport as well as the problem of determining realistic (necessary) volumes for the transport plans and insuring a stable supply of fuel and raw and finished materials for the national economy sectors.

In this connection, when compiling long-term programs for the development of industry and agriculture, both the sectorial administrations of Gosnab USSR and the Soynzglavsabsbyt's must defend their positions on a more fundamental level, must obtain the establishment of rational volumes of production in the required products list and assortment, must adopt the most economical fuel regimes in the operation of the electric power stations, and must attain the maximum possible proximity of the regions of consumption to the points of production.

The fuel regimes of many of the electric power stations, especially in the central regions, which were accommodated to the country's fuel bases established in past years, have in the majority of cases remained unchanged, despite the extensive and significant changes in the structure of the fuel balance. This is precisely why Donets coal had to be shipped to the zone of proliferating use of Kuznets coal and Kuznets and Inta coal had to be shipped for the electric power stations of Minenergo [Ministry of Electric Power Stations] UkrSSR. To the Igumnovskiy GRES they are continuing to deliver Donets coal in the opposite direction from the flow of Siberian coal going to the European part of the country and the Ukraine.

The past 10 years have seen a sharp increase in the distance covered by the shipments of Kuznets and Karaganda coal to the European part of the country and the Ukraine. And whereas in the first instance the volume of the deliveries has more than doubled, in the second case the increase has been tenfold. At the same time, more than one million tons of coke and coke breeze obtained from Kuznets and Karaganda coal are being shipped from Donetsk to the Tselinna, Alma-Ata, Central Asian, Sverdlovsk and South Ural railroads.

The USSR Minugleprom [Ministry of the Coal Industry] and the USSR Minenergo are not preparing an effective long-range program for the establishment of economically expedient fuel regimes for the electric power stations, programs providing for the use of coal from the nearest deposits. This leads to the maintenance of considerable volumes of unnecessary long-distance transport of coal from various basins. Minugleprom USSR is, moreover, not manifesting the proper initiative in respect to the introduction of progressive types of transport in the enterprises of the industry: conveyer, pipeline and pneumatic transport and suspension cable for



transporting the coal from the place of extraction to the concentration plant. As a result, every year about 100 million tons of coal are moved for short distances and in countershipment directions for concentration alone. And because of the systematic failure to fulfill the prescribed quantities of concentration, as much as 5 million tons of rock are shipped along with the coal.

Without relieving the ministries of their responsibility, it should be noted that the Gosnab subdivisions also--the supply administrations and the intersectorial fuel, metal and metal products links, the Soyuzglavugol' [Main Administration for Interrepublic Deliveries of Coal] and the Soyuzglavmetall are seemingly still not being sufficiently consistent and active in working on this problem with Gosplan USSR. They are still not fully exercising their right--the right to pave the way for and create the necessary conditions for a stable fuel supply for the national economy.

It should be noted that the NIIMS [Scientific Research Institute for Material Supply] has made an attempt to prepare optimum schemes for the transport of coal and to determine expedient schedules of operation for the electric power stations. But unfortunately, the research does not include a comprehensive evaluation of the national economic effectiveness of this schedule, an evaluation which takes into account not only the transport costs but also the production costs. It also lacks a tie-in between the fuel requirements and the fuel resources in both the country as a whole and for the various regions with respect to the types of fuel. This work is therefore in need of a fundamental revision.

Important and critical problems must be resolved by the Soyuzglavneft' [Main Administration for Interrepublic Deliveries of Petroleum Products], the Goskonnefteproduktov [State Committee for Petroleum Products] of RSFSR, and the USSR Gosnab Administration of Fuel Supply and Intersectorial Relations in the matter of systematizing the shipments of petroleum and petroleum products and improving to a significant degree the supplying of these to the consumers. In this too there are formidable difficulties. For example, for a long time now no solution has been found for the problem of distribution of production. The development of pipelines and product lines has been meager. This is making it impossible to relieve the railroads of the transport of petroleum products.

The failure of the USSR Minneftekhimprom [Ministry of the Petrochemical Industry] to adequately develop the capacities for petroleum products production in Ukrainian SSR, the Baltic area, Central Asia and the Far East is resulting in these areas falling 50-55 million tons short of covering their deficits. At the same time, the level of production concentration attained in the Volga region and Central and Eastern Siberia is making it necessary to ship petroleum products over long distances via the railroads.

The buildup of the secondary process capacities in the Minneftekhimprom USSR is lagging far behind the growth of the capacities for primary processing of petroleum. This is forcing the petroleum refineries to plan a limited assortment of petroleum products on the basis, not of the requirements of this particular region, but of the available processes. The inevitable outcome is the development of considerable volumes of cross hauls of petroleum products. Slow progress is being made in building local production pipelines, particularly from the petroleum refineries to the adjacent electric power stations, airports and other large consumers.

There is need for improvement of the existing system of distribution of the deliveries and the planning of the shipments of petroleum products. It is evidently necessary in this regard to define the functions of Soyuzglavneft' in Gosnab USSR as the chief organization in respect to these questions. At present only the republic petroleum sales organs do the planning of shipments of petroleum products. In the country as a whole Soyuzglavneft' does not concern itself with the planning of shipments. It is extremely difficult and, to be frank, an ineffective approach, to implement within the framework of Gosnab USSR a single transport and supply and sales policy designed for optimization of the transport and economic relations between the consumers and the suppliers. Only concentrating in some hands the complex of all these tasks will create a reliable guarantee of a stable and uninterrupted supply of petroleum products with minimum transport costs.

It is necessary, finally, to resolve this problem--are the petroleum products pipelines to be in the Goskomsnabproduktov RSFSR system or is all the work for their development and operation to be concentrated in Minneftekhimprom USSR, as has for a long time been done successfully in the case of transport of crude oil.

Considerable criticism has been leveled at Soyuzglavmetall because of poorly organized shipments of ferrous metals with cross hauls and unnecessarily long-distance shipments. It must unfortunately be said that the Minchermet [Ministry of Ferrous Metals] USSR and Soyuzglavmetall are not taking the necessary measures to curtail the exchange of ferrous metals between the European regions of USSR and the eastern parts of the country. More than 14 million tons of metal are being shipped from European USSR to the East and more than 27 million tons in the opposite direction. And these amounts are increasing from year to year.

Despite the great increase of production and consumption of metal, there has continued to be an assortment discrepancy between its production and consumption in some regions. For example, despite the surplus production of sectional steel in the Ukrainian SSR and the Ural region, they are receiving such steel from other economic regions of the country. The Ural region ships considerable quantities of plate steel to other areas and at the same time also brings it in from other areas.

The assignment of the production of some types and grades of metal at the plants without regard to the area requirements and the disturbances created in the metallurgical cycle are manifested unfavorably in the work of the metallurgical industry and the railroad transport.

At the Cherepovets plant violation of the proportions of billet and rolled stock production resulted in an increase of more than 3 billion ton-kilometers in the superfluous work of the railroads in 1979 and 6 billion ton-kilometers in 1980. The expenditures for the shipments increased to 18 million rubles. And this is after all about 60 percent of the cost of one converter. There has been no curtailment of the amounts of conversion metal delivered through intraministry cooperation. The distance of the shipments is steadily increasing. Despite all this, neither the Administration for Metal and Metal Products Supply and Intersectorial Relations nor the Soyuzglavmetall is taking the necessary measures to eliminate irrational shipments.

A similar picture has also recently been in evidence in the Soyuzglavtsement (Main Administration for Interrepublic Deliveries of Cement), which just quite recently advocated improvement of the transport and economic links, elimination of irrational shipments, and reduction of the distances entailed. There are taking place unwarranted long-distance shipments of cement from RSFSR regions to Uzbekistan and from Ural cement plants to the North Caucasus and Transcaucasus regions. Measures have not been taken to cut down the distance of shipments of cement for export and to the regions of Tyumenskaya Oblast.

It should be noted that the Gosnab's of the Union republics and the main territorial administrations of Gosnab USSR have been asked to give substantial assistance to the Soyuzglavsnabst's in systematizing their shipments. However, there is still lacking the proper and mutual motivation for this. In the last two years the Gosnab's of the Union republics have begun to prepare and implement yearly measures for the rationalization of shipments of freight and these have been approved by Gosplan USSR and Gosnab USSR. But the main territorial administrations have remained essentially detached from this important undertaking, limiting themselves to various suggestions from time to time.

Unfortunately, the rare suggestions from the sites are not always reviewed by the Soyuzglavsnabst's. At best only 10-15 percent of those received are adopted and sometimes even less. The deciding factor in this is apparently the existing procedure, whereby suggestions from the main territorial administrations go first to the transport administration of Gosnab USSR and from there for final action to the appropriate Soyuzglavsnabst's. The latter, after reviewing the suggestions, apprise the transport administration of the results. And then, finally, it is submitted to the addressee for a final decision.

What would seem to be a more effective and efficient organization of the work would be the following. The Soyuzglavsnabst's should regularly ask the territorial administrations for suggestions on desirable changes in the distribution plans and should make every effort to see to it that these ideas are carried out in the compilation of the plans for allocation and ordering of the products. Then, in closer cooperation, the organs of Gosnab USSR can accomplish the overall task of optimizing the transport and economic relations.

What is happening now? For example, the Dal'khimnabst (Far East Chemical Supply and Sales Administration) has for two years been appealing to the Soyuzglavkhim (Main Administration for the Interrepublic Deliveries of Chemical Products) with suggestions that it eliminate the inefficient shipments of oil of vitriol. This product is being shipped from Chita in tank cars to a plant in Komsomol'sk-on-Amur. There it is poured into barrels, loaded on railroad cars, and returned to station Bol'shoy Never for the needs of Yakutia. The oil makes a trip of 4,000 kilometers on the railroad. This run can easily be shortened. The thing is, from Chita to Berkakit, where the base of the Yakut main territorial administration is located, is only about 1,000 kilometers. To avoid hauling the oil of vitriol to Khabarovskiy Kray and back, it is necessary to order the Yakut main territorial administration to arrange for acceptance of it at its own base. But the Soyuzglavkhim has neither the legal nor the administrative authority for this.



It is essential to strengthen the transport subdivisions in the Soyuzglavnabsoyts, Union republic Gossnab's, and main territorial administrations. From this standpoint, dissemination of the valuable undertaking of Gossnab UkrSSR also deserves attention. A year ago they set up there a special division which deals with optimization of the transport and economic relations and improvement of the use of the transport facilities. This work was fairly well organized in the Gossnab's of Russian, Belorussian and Uzbek SSR. It is important that in the other Gossnab's of the Union republics and in the main territorial administrations, along with the development of centralized supplying of output by motor transport and improvement of the use of the railroad rolling stock at the enterprises for deliveries of output, more attention be given to improvement of the shipments, elimination of unnecessary long-distance and inefficient shipments of freight, and reduction of transport costs. It is also essential to significantly strengthen and escalate the level of work of the USSR Gossnab organs in respect to development of container and package shipments, which have a direct impact in significantly reducing the amount of manual labor, cutting down the expenditures for transporting the freight, and safeguarding it in transit.

It is seemingly proper to find fault with the advanced training institute VIFK in Gossnab USSR. The plans for the work of the institute make virtually no provision for improving the skills of the transport workers of the material and technical supply system.

The USSR Gossnab organs are called upon to play a major role in the rationalization of shipments. It is important to employ all possible means to encourage the initiative of the sites and to fully support the suggestions of the labor collectives and the organizational managers. It is necessary to resolve the basic operational problems quickly and without unnecessary delays and agreements.

COPYRIGHT: Izdatel'stvo "Ekonomika", "Material'no-tehnicheskoye snabzheniye", 1981.

7962

CSO: 1829/216

## RAILROAD

### IMPORTANCE OF QUALITY TRANSPORT STRESSED

Moscow GUDOK in Russian 9 Apr 81 p 2

[Article by M. Trikhunkov, docent at the MIIT [Moscow Institute of Railroad Transportation Engineers]: "The Economics of Quality--Problems and Opinions"]

[Text] Since transport, as we know, does not increase the material volume of commercial product, we strive to reduce the expenditures for shipment as much as possible. But the pursuit of lower-price goods sometimes backfires. Inadequacies in the development and equipment of transport increase the national economic costs because they slow down the process of movement of the product and increase the losses due to poor safeguards. In the last 10 years railroad transport alone has seen its losses from inadequately safeguarded shipment and delays in deliveries of freight increase nearly seven-fold and amount to more than 100 million rubles. In the entire national economy these losses are considerably more.

The best quality of transport usually requires additional expenditures. It is important for each type of freight to determine what increases of expenditures are economically desirable so that they will be repaid by the effect obtained in the national economy. But this requires improvement of the methods of evaluation. In our opinion, there is considerably more effectiveness than has been assumed for the capital investments used to assure the safety and expedite the deliveries of output at all the stages of its movement from suppliers to consumers.

Especially effective are the measures for safeguarding agricultural output because it is largely perishable. Hence, it is necessary to take a look at the transport and warehousing construction in the agroindustrial complex, including the matter of the most effective investments in agricultural production. It is important to keep in mind that it is much cheaper to safeguard output than to produce it again.

This conclusion is also valid for industrial output. Accelerating the rates of development and technical retooling of the entire transport and warehousing system of the country are matters of enormous economic and social significance. The figures show that the reduction in losses of bulk freight alone on the railroads justifies up to 4-5 billion rubles of capital investments for these purposes.

The most important measures for stepping up the quality of the goods shipments are specialization of the rolling stock and loading of the freight in containers and packages. In our opinion, the economic importance of these aspects of technical



progress in the transport process is something which, as before, cannot be overestimated. The level of specialization of our freight car inventory is only 1/3-1/4 that in the United States and some other countries.

Specialization of the freight cars has a direct effect on many indicators: it enhances the safety of the freight, speeds up its delivery, increases the static load, and reduces the cost of the loading and unloading operations. But at the same time, it increases the extent of the run without load and escalates the cost of the shipments. Because of the complex nature of the distribution of the effect and the costs among the various sectors--railroad car building and transport--the freight shipping and receiving enterprises, in devising individual methods, do not always give priority to the national economic interests ahead of the departmental ones.

According to our estimates, the overall national economy effect of the use of specialized railroad cars and containers in the shipment of many products (coal, ores, cement, mineral fertilizers, glass, bricks, paper, grain and other products) usually greatly exceeds the additional outlays. Thus, if in the 1981-1990 period the use of specialized cars for transport is brought up to 60 percent for fertilizers, 95 percent for cement, and 50 percent for grain and paper, then in 10 years there will be a net saving of about 500-600 million rubles.

To speed up the progress in this field, it is necessary to put all the levers to work. It is desirable, we feel, to put special emphasis in the long-range and yearly transport plans on the assignments for shipments in specialized cars, containers and packages. It is also important to regulate the mechanism for mutual responsibility of transport and freight owners in the interests of fulfillment of these assignments and to see that it is reflected in the regulations of the railroads and the rules for freight shipments.

But particular attention must be focused on the economic levers. After all, one of the reasons for the slowness in introducing progressive technologies and equipment which would enhance the safety of the freight is the lack of economic motivation for this in the freight owners and transport. Unfortunately, for them this frequently entails superfluous expenditures. For example, the brick yards today find it wholly inconvenient to use packages for the shipment of bricks--this would only increase the enterprise's expenditures and it would receive nothing at all by way of compensation for this. Consequently, the predominant practice is to ship bricks in bulk with resulting large losses due to breakage. As a rule, the railroads find it wholly inconvenient to use specialized cars instead of the general-purpose ones because it reduces the amount of their profit and the effect derived from the optimum safeguarding of the freight is usually felt entirely by the consignee.

The rate system can be an effective instrument for a more equitable distribution of the effect obtained. Differentiation of the rates according to types of rolling stock and according to methods of shipments with varying quality levels helps in finding means to compensate the freight shippers and transport for their additional costs.

Measures to provide economic incentive for stepping up the quality of the shipments must be worked out for all the levels of management of transport and warehousing operations: on the scale of the national economy, for its various sectors, subdivisions and enterprises, and for the collectives and individual workers.

We have touched upon only some of the problems entailed in stepping up the quality of shipments. In conclusion, I would like to emphasize again the point that this is a major state task. And it can only be accomplished by collective and coordinated efforts.

7962

CSO: 1829/255

## RAILROAD

### ADVANCES NOTED IN MACHINE-BUILDING FOR THE RAILROADS

Moscow EKONOMICHESKAYA GAZETA in Russian No 18, Apr 81 p 2

[Article: "Heavy and Transport Machine Building--A Review"]

[Text] Heavy and transport machine building supplies new implements, machines and equipment for such leading sectors of the national economy as ferrous and nonferrous metallurgy and railroad transport. The enterprises of Mintyazhmash [Ministry of Heavy Machinery Manufacture] manufacture large quantities of mechanization and automation facilities, materials handling, loading and unloading, and warehousing operations, equipment, and consumer goods.

The years of the 10th Five-Year Plan saw a substantial escalation of the technical level and quality of the output. About 2 million tons of various kinds of equipment for ferrous metallurgy were delivered. The Southern Ural Machine-Building Plant developed manufacture of installations for the continuous casting of billets for sectional rolled metal and the association of Zhdanovtyazhmash [Zhdanov Heavy Machinery Plant] materials for the largest containers.

The associations of Uralmach [Ural Heavy Machinery Plant] and Elektrostal'tyazhmash [Electric Steel Heavy Machinery Plant] developed and put into operation highly productive machine tools and assemblies with automated technological operations. On order from Mintsvetmet [Ministry of Nonferrous Metallurgy] USSR, the Alma-Ata Heavy Machinery Plant built an effective unit for continuous casting and rolling of aluminum wire.

Production of equipment for underground extraction of ore was expanded; in the period of the last five-year plan the volume of this production was increased by 36 percent.

Delivered to the coal mines were rotary excavator complexes with a productivity up to 5,000 cubic meters of mineral material an hour. For example, the complex manufactured by the association of the Novokramatorsk Machine Building Plant makes it possible to extract and load two railroad trains of coal in an hour. The petroleum workers of Western Siberia received from Uralmach complete units capable of drilling in one area 16 inclined wells with a depth up to 3 kilometers. The machine-building workers of the association of the Voroshilovgrad Locomotive Plant developed new two-section railroad freight locomotives with a capacity of 8,000 horsepower each and the association of the Kolonna Plant developed one-section passenger locomotives

with a capacity of 4 and 6,000 horsepower each. These organizations have improved their indicators for consumption of metal, fuel and oil.

The Kryukovo and Stakhanovskiy railroad car-building plants are delivering self-loading and unloading cars for the transport of grain, mineral fertilizers and flour. The operation of these cars has resulted in a three-four-fold increase in labor productivity in the loading and unloading work. This is responsible for obtaining a labor saving of 95,000 workers a year.

In the 1976-1980 period the diesel engine builders developed 30 new modifications of engines, diesel generators, and gas-driven compressors. The stockpile of these increased an average of 1.4-fold and resulted in a substantial reduction in the proportionate consumption of fuel and oil. The unit capacity of the machines rose 20-30 percent. The associations Konveyer (city of L'vov), Krian (city of Uzlovaya, Tul'skaya Oblast), and the Aleksandriyskiy and a number of other plants increased their production of modern materials handling equipment.

The designers and researchers of the industry achieved definite results in reducing the proportionate consumption of metals by the machines. The result was a saving in the period of the five-year plan of 350,000 tons of metal over and above the norms. More than 600 types of machines and equipment were awarded the State Badge of Quality. Their share of the total volume of production reached 31 percent.

Proportion of Output with the State Badge of Quality (in percentages of the total volume of Production)

[Year]	[Percent]
1970	6
1975	19
1980	31
1985	37

In five years the production of heavy and transport machinery output increased 22.4 percent and of cultural and domestic goods 44 percent. And 95 percent of the increase of output resulted from increased labor productivity.

#### The 11th Five-Year Plan--New Tasks

The 11th Five-Year Plan calls for an increase of more than 31 percent in the volume of production in the industry. The growth is to come from remodeling and technical retooling of a number of associations and enterprises, especially their billet production, from the introduction of advanced technological processes, and from improved use of the production capacities. The tasks of the workers of the industry are to organize the manufacture of 900 new items or essentially modernized machines and to remove from production 150 types of outmoded products.

Accelerated rates are planned for the development of the most progressive types of equipment. Thus, production of machines for continuous casting of billets is showing a 2.2-fold increase. The metallurgists should obtain more units for the



processing of molten steel than they did in the last five-year period. There will be developed and put into operation machine tools which guarantee the production of rolled metal of higher precision quality. These machines will enable us to economize on steel to the extent of more than 4 percent in the production of rolled stock.

Mintyazhmash has been assigned an important role in the further mechanization and automation of the materials handling, loading and unloading, and warehousing work in the national economy. In addition to the development of capacities for the production of these facilities, they must expand their products list and carry out unification of the basic types of machines and mechanisms.

In the 11th Five-Year Plan the rolling stock of the railroads is being replenished and modernized. Delivery of main-line locomotives is increasing. In 1985 their overall capacity will increase more than 40 percent as against 1980. The Voroshilovgrad and Kolonna plants are being remodeled.

Significant changes are being made in the structure of railroad-car building. There will be markedly increased growth of production of cars and tank cars with greater carrying capacity. The proportion of special covered cars in the total car production will go from 20 percent in 1980 to 27 percent at the end of the current five-year plan.

Production of diesel engines is being expanded. There has also been assigned the task of organizing manufacture of diesels and diesel generators which conform to the technical level of the best domestic and foreign models.

The association of Uralmash has been tasked with the job of making a significant increase in the production of units for the drilling of operational oil wells and deep test wells, including those on the country's continental shelf. There has been an increase in the quantity and unit capacity of the single-bucket excavators needed in the open-cut work of the coal and ore industry. In 1982 the Krasnoyarsk Heavy Excavator Plant, which is now under construction, should produce the first of the machines with a 12.5-cubic meter capacity.

In the 11th Five-Year Plan it is planned to increase 1.6-fold the volume of production of cultural, domestic and household goods at the enterprises of Mintyazhmash; also, to put into production more than 200 new products in mass demand.

#### **The Program of Technical Progress**

Increased production efficiency in the associations and plants of the industry results from acceleration of scientific-technical progress. The chief directions in this regard are the introduction of minimum-waste technology and full mechanization and automation of the labor-intensive operations. Slated to obtain extensive development are the manufacture of components by power metallurgy methods, plasmic and electron-beam processing of metals, and electroslag smelting. It is planned to put into operation automated mechanical processing systems controlled via EVM [electronic computers], 12 large automatic lines, 150 industrial robots, 650 hinged balancing manipulators, and about 1200 metal-cutting machines with digital program



control. Provision is being made for the full mechanization of 12 shops and 179 sectors and lines in machine assembly production as well as 390 plant and shop warehouses.

In 1985 the fully mechanized shops, sectors and lines should furnish 36 percent of all the castings, 45 percent of all the forgings and stampings, and 53 percent of the welded metal structures. Implementation of the program for improvement of the technology, mechanization and automation in the production processes will in the 1981-1985 period result in a labor saving of 57,000 workers and a 150 million ruble reduction in the cost of production. The maximum creative efforts of the scientific research institutes and the plant specialists should be addressed to this undertaking.

### **Economics--the Key Task**

The enterprises of Mintyashmash are the largest consumers of metals and other materials. Paramount significance therefore attaches to the task of reducing the weight of the equipment in production, cutting down the norms for consumption of rolled metal, and reducing the quantity of waste materials. It is planned to bring the 1985 coefficient for the use of metal in the industry up to .81 as compared to the 1980 figure of .78.

However, the work being done by Mintyashmash is not fully meeting the requirements of the economy. For example, in railroad-car building the projected reduction in the five-year plan period in the norm of expenditure of rolled metal is only 5-6 percent, which is wholly inadequate. Virtually the only effective measure is conversion to the use of hollow railroad-car axles. As it is, railroad-car building is expending more than 45 percent of all the metal consumed by the industry.

The key task is to achieve more effective use of the fixed production capital. It should be emphasized that the available capacities have not been fully utilized. In 1980 the coefficient of renewal of equipment not only was not increased as compared to 1975 but even declined. This indicator is low in the Lyudinovo Locomotive-building Plant, the Khar'kov Freight Handling-Equipment Plant, and the Gor'kiy "Dvigatel' Revolyutsiy" plant. By the end of the five-year plan there is every possibility of effecting a considerable increase in the coefficient of renewal of equipment.

The industry is carrying out measures for improvement of the operational mechanism. The level of labor productivity and the requirement for labor and financial resources are being assigned values on the basis of the indicator for normative net output. Normative distribution of profit has been put into effect. The NII KB [design office scientific research institutes] and the enterprises are using the cost-accounting system for planning, financing and motivating the work in accordance with the new technique. In the current five-year period there will be implemented a unified system of cost-accounting relations at all the levels of production, embracing the structural subdivisions from brigades to ministries.

Use of the brigade forms of organization of labor has become widespread. In five years the multifunction, specialized and complex brigades have doubled in number

and they now employ more than half of the industry's workers. By 1985 it is expected that more than 75 percent of all the workers will have gone over to the brigade form.

According to the 1981 plan the volume of production in the enterprises of Mintyazhmash is to increase 6.4 percent over last year. Developing mass competition in response to the 26th Party Congress decisions, the workers of the industry have fulfilled the first-quarter assignment by 101 percent.

Nine enterprises fell behind and failed to fulfill the quarterly plan for normative net output.

The ministry and the operational managers of the industry are required in the near future to correct the lag and to assure fulfillment of the plan for the entire products list and for all the technical and economic indicators.

7962

CSO: 1829/249

## RAILROAD

### MORE EFFICIENT TRANSPORT OF SHORT HAULS URGED

Moscow EKONOMICHESKAYA GAZETA in Russian No 14, Apr 81 p 11

[Article by V. Krylov, chief of a section of the Northern Railroad, city of Yaroslavl': "A Short Run for Such a Railroad"]

[Text] The steel lines can properly be compared with the arteries which are indispensable to the normal functioning of the country's complex economic organs.

Under these circumstances, it is especially important to use every car and locomotive efficiently so as to best accomplish the tasks assigned to transport. A good deal has been done in this regard in the recent period: the weight of the trains has been increased (1.8-fold in the Yaroslavl' section of the Northern Railroad), the speed of their movement has been stepped up, and additional tracks have been put into operation. And still we, the railroad workers, have received many, many complaints, and moreover serious ones.

What potential do we possess to enable us to fulfill all the plans and to accomplish this in the context of the growing requirements stemming from the basic directions of the country's economic and social development? There is such potential and it is very substantial and real.

There is first of all, in my opinion, a need to more efficiently organize the so-called short-run shipments. Here is an example. In Yaroslavskaya Oblast near stations Sil'nitsy and Petrovsk there are seven pits for extraction of gravel, rubble and sand for various departments. These materials are delivered mainly to nearby cities, to which good highways have been built. The motor transport is easily handling the shipments, including loading and unloading, within one work shift.

For us the forming and inspection of trains, the switching operations, and the loading, delivery and unloading take two days on the average. And the flatcars are badly needed for the shipment of coal from Inta and Vorkuta.

The construction people insist on railroad shipments even though it has long been known that for short distances it is more convenient to use motor transport. This, in our opinion, requires the establishment of the necessary discipline with the help of the planning organs and the construction ministries.

We must do a great deal to cut down the number of intracenter shipments and, as a matter of fact, the number of intracity shipments. On the orders of the Glavneftesnab [Main Administration for Petroleum Supply], heating mazut and other petroleum products produced, for example, at the Novoyaroslavl' Oil Refinery sometimes "roll" around the enterprise for weeks. They suddenly release one tank car, pour off only half from another, while a third one waits its turn for days. Here too we can and must make more effective use of the special motor transport with its large capacities.

A similar situation has developed in respect to the shipments of grain and flour between the elevators, bases, warehouses and neighboring bread factories. We allocate up to 100 railroad cars monthly for this. And if this did not take care of this work in full, then the motor vehicle operators would be fully capable of handling two-thirds of it. Even more cars are diverted for transporting bricks, reinforced concrete, shale, lumber and glass within the oblast center.

There are long layovers of the cars which deliver to the rural areas mineral fertilizer and bulk building materials: cement, alabaster and lime. The cement truck is still hauling freight to some points while a railroad car sometimes takes 8-10 days. In this regard, a beneficial role would be played by the setting up on a shared basis of interregional trestles and storehouses near those equipped with pneumatic devices. Then the arriving "revolving equipment" would be unloaded immediately. The fertilizers and building materials could be delivered later by trucks directly to the kolkhozes and sovkhozes.

As we see, the interests of the railroad workers and the motor transport workers are very closely intertwined. Following the example of the Leningrad workers, our section concluded a cooperation contract with the oblast motor vehicle administration and the collective of station Yaroslavl'-Moskovskiy with motorized column No 1137. The fruits of this move are already noticeable but they can be far more tangible. If we follow the recommendations of the MPS [Ministry of Railways] for shifting to motor transport shipments for a distance up to 100 kilometers, then we should by this means reduce the railroad's load by a million tons a year. The motor transport administration has now received from the Ministry of Motor Transport RSFSR a directive calling for 100,000 tons but it could only take 4,000 tons. Of course, without junction facilities problems of this kind cannot be resolved in the planning organs here. As stated in the decisions of the 26th Party Congress, it is essential to strengthen the cooperation among all the types of transport.

No less urgent for us in this connection is the problem of mixed shipments by "railroad--river (sea)" and the reverse. To the harvests extending from the Lower Volga to Rybinsk thousands of tons of grain are delivered by water and there reloaded on to railroad cars and sent on to Leningrad. Why these transshipments when there is a Volgo-Baltic [Volga-Baltic Waterway]? Similarly, without any sound reasons, they are carrying out unnecessary "transfer" of coal, metal and other outputs.

A subject that is attracting attention is the matter of the differences in the shipment volumes themselves in these transshipments. According to the plan, we are supposed to convey 100 railroad cars a day to the rivers for loading on barges but their assignment calls for only half this amount. In a unified transport system there should be no discrepancies like this.

In 1981 our collective has set for itself the goal of accelerating the turnover of railroad cars as compared to last year's figures. We will obtain a reduction in the layover time of the rolling stock for loading and unloading.

7962

CSO: 1829/255



## OCEAN AND RIVER

### INCREASE FREIGHT SHIPMENTS BY JOINT RAIL AND WATER TRANSPORT

Moscow **REKHNOY TRANSPORT** in Russian No 5, May 81 p 9

[Article by V. Marinichenko, deputy chief, Main Administration for Cargo, Ministry of the River Fleet: "Develop Joint Hauls"]

[Text] The decree of the CPSU CC and the USSR Council of Ministers entitled "On Measures to Develop River Transport in 1981--1985" has outlined the change-over of 24--33 million tons of various types of freight from rail to river transport. In order to carry out this decree the Ministry of the River Fleet has developed proposals which provide for hauls to be made of Kuznetak coal in amounts of as much as 12.4 million tons, of iron ore from the Olenegorsk and Kovdorok deposits in amounts of as much as 3.5 million tons, of Kurak ore with transshipment at the ports of Ust'-Donetsk and Perm' in amounts of as much as 1 million tons, and of iron pyrites from the Ural region in amounts ranging up to 1.8 million tons.

Hauls of apatite concentrate will be increased by 1.5 million tons, while those of lumber from the northern and eastern regions of the country will be increased by 2.3 million tons. In addition to this, hauls of Siberian lumber to the southern part of the European region of the USSR will be changed over in amounts ranging up to 1 million tons with transshipment to river transport at Verkhnechnavolzhskiy Gorodki, molding sand from the Durtsevskiy Quarry for the Kama Automotive Plant in amounts as much as 0.9 million tons and 0.8 million tons of sand from the Verkhnedneprovskiy Mining and Metallurgical Combine for the Gor'kiy Automotive Plant and the Yaroslavlskiy Motor Plant.

Plans have also been made to change over from railroad to river transport hauls of cement amounting to 0.4 million tons from the Voskresenskiy Plant for enterprises in Moscow, 0.3 million tons from the Zhigulevskiy Plant to points along the Volga River, 0.4 million tons from the Chernorechenskiy Plant for enterprises for the Novosibirskaya, Tomskaya, and Tyumenskaya Oblasts.

The Main Administration for Cargo of the Ministry of the River Fleet and the steamship lines have carried out a number of measures aimed at seeking out new cargo routes and changing them over to water; moreover, the principal attention has been devoted to seeking out cargoes being shipped from points on the Don to two points on the Volga and Kama, as well as for loading up empty routes. During the 1980 shipping season hauls of iron pyrites to Cherepovets were increased by 60,000 tons, of iron-ore concentrate from the Kola deposit for the Magnitogorsk Metallurgical Combine--by 82,000 tons, and of coal for the electric power stations

of the Ukrainian SSR--by 1,880,000 tons. Hauls have been developed for Vorkuta coking coal being shipped to the Yasinovskiy Coking and Chemical Plant in an amount of 270,000 tons. Hauls have been carried out for the first time in direct, joint, rail-water transport--hauls of Kola apatites with transshipment via the port of Medvesh'yegorsk for the Cherepovets Plant amounting to 75,000 tons, fluxes from the Komsomol'sk Ore Administration with transshipment via Ust'-Donetsk to the docks of the industrial port of the Cherepovets Metallurgical Plant in the amount of 230,000 tons. Improvements in technical and economic research will allow us to make an additional changeover to river transport of freight traveling along railroads parallel to water routes.

One of the basic reasons which is retarding the increase of hauling freight in joint, rail-water transport is the failure to meet scheduled deliveries of such freight to customers because of an insufficient delivery of cars to the transshipment ports by the railroads.

Despite the fact that the time required for servicing rolling stock at the ports has been reduced over the past few years, and the utilization of cars with respect to freight-hauling capacity has increased by almost seven tons as compared with 1975, cargoes remaining and awaiting transshipment to railroads amount to many millions of tons by the end of the shipping season each year due to an insufficient supply of empty cars. Accumulation of cargoes in port warehouses reduces the potentials of the docks with respect to transshipment of cargoes, increases the time periods required for delivery, lowers the quality of the cargoes, and, as a result, consignees refuse to present cargoes for hauls by joint transport.

The situation with regard to hauling freight in direct, joint, rail-water transport has not improved; millions of tons of lumber, ore, hard coal, and other types of freight are being hauled by railroads running parallel to water routes. Thus, in 1980 the plan for the Ministry of the River Fleet established a goal for hauling cargoes in joint transport of 58.5 million tons, including 27.3 million tons to be transhipped to railroad transport and 31.2 million tons to river transport. But only 47.2 million tons (80.6 percent) were actually hauled. In order to fulfill the plan, norms for supplying rolling stock were coordinated with the Ministry of Railways in the amount of 1,095,000 cars, including 504,000 empty cars and 591,000 loaded cars. Despite the solution coordinated with the Ministry of Railways the railroads supplied to the ports only 794,000 cars (72.5 percent), including 378,000 (75 percent) empties and 416,000 (70.4 percent) loaded. In toto the ports received 126,000 too few empty cars (from which 7.3 million tons of freight for transshipment could have been unloaded) as well as 175,000 loaded cars (with 11 million tons of freight).

Cars were supplied particularly badly to the ports of Kambarka, Ust'-Donetsk, Kalach, Ufa, Perm', Levishino, Kotlas, Lesosibirsk, and Khabarovsk.

The unsatisfactory delivery of empty cars to the ports led to a considerable piling up of cargoes in them. Remnants of cargoes subject to transshipment to railroads as of 1 December 1980 amounted to 7,092,000 tons, including 3,514,000 tons of mineral building materials, 266,000 tons of lumber, 1,981,000 tons of coal, 792,000 tons of ore, 53,000 tons of metal, 54,000 tons of scrap metal, and 372,000 tons of salt. Primarily cargoes were left without being shipped out in the ports

of Perm', Kambarka, Ufa, Ust'-Donetsk, Volgograd, Novosibirsk, Krasnoyarsk, and Khabarovsk.

Since the 1979 shipping season more than 200,000 tons of bauxite have not been shipped out of the port of Kambarka, scrap metal and non-ferrous metal have been shipped out of the port of Krasnoyarsk at a slow pace, as has also been the case with non-ferrous ore from Lesosibirsk; in connection with this, many complaints have been received from the consignees of cargoes.

During the last shipping season a serious situation took shape with regard to the export of Kuznetak coal from the ports of Ust'-Donetsk and Volgogradsk. As of 1 December 1980 there were more than 500,000 tons of coal in them. As many as 45 ships remained idle there waiting to be unloaded.

Along with the unsatisfactory delivery of cars, some ports fail to service them on schedule. One of the principal reasons for such a situation is the busy activity of the wharves engaged in loading and unloading transshipment cargoes which have not been shipped out on schedule by the railroads. These shortages were manifested particularly in the ports of Kazan, Kuybyshev, Levshin, Kambarka, Ufa, Ust'-Donetsk, Pechora, and Novosibirsk.

Responsibility for the failure to keep on schedule in shipping out freight must also be borne by the river workers. In a number of ports round-the-clock operations have not been organized, traffic schedules of the ships are not observed, and in the final analysis this has caused above-normal idle times of cars being serviced.

Plans have been made to carry out in 1981 organizational-technical measures which will permit the elimination of shortcomings and additionally change over to river transport approximately 1.5 million tons of cargoes and to bring the amount of their transshipment up to 58 million tons.

COPYRIGHT: "Rechnoy transport", 1981

2384

CSO: 1829/272

## MISCELLANEOUS

### PROGRESS IN EXPERIMENTAL CABLEWAY CONSTRUCTION HAILED

Tbilisi ZARYA VOSTOKA in Russian 21 Apr 81 p 3

[Article by A. Bazhanishvili: "The 'Cables' Go to the Mountains"]

[Text] The outlines of this construction project can be guessed immediately from the VAZ complex of the special motor vehicle center. You would not count it among the massive projects: Tbilisi has installations that are even larger. But here in Orkhevi they are building an experimental production base for the NIPI [Scientific Research, Planning and Design Institute] of Transport Automatic Equipment Transavtomatika under the Georgian Main Scientific Production Administration for Cableways (Gruzglavkanatdor).

That matters are progressing well on the construction project is clear from the very first glance. The work is proceeding in a distinct rhythm according to the schedules. The construction workers of PMK [Mobile Mechanized Column]-19 of Trust No 2 of the republic's ministry of construction has erected an administrative and service building for the base. Nearing completion is the construction of a production building, a group of warehouses, and a garage. What remains chiefly is the work for installation of machines and equipment.

As we have already said, the construction project is not the largest. But it would be hard to overestimate its importance for the customer--Gruzglavkanatdor. Because here on the experimental production base they will make up test models for the new freight passenger cableway structures. In other words, the base will become the basis of the technical development of the industry. These industries are important not only for the republic but for the entire country. Because in the five years that have elapsed since the Gruzglavkanatdor was established this organization has grown into a main scientific production administration with the functions of a leading organization of the country.

In recent years more and more of the cableways have been built, and their importance in the overall system of the country's transport facilities is increasing with each passing year. What has caused so substantial a development of the PKD (simple cableway)? First of all, the factor of its economic desirability. The construction of cableways requires comparatively small one-time capital investments as compared to the construction of motor roads or railroad tracks. The operating



costs for the maintenance of the PKD are so small. One more advantage: for the overhead cableways it is not necessary to take over large land sectors.

There is one other factor which argues in favor of the cableways: they can "penetrate" to places where the conventional transport means do not get to--to the almost inaccessible mountain regions, the Alpine grasslands, etc.

Also playing a far from minor role in gaining increased attention for this type of transportation is its high level of reliability. That the cableways constitute one of the safest means of transport is confirmed by many years of world-wide operation of monorails equipped with automated control systems. And to wind up the discussion of the advantages of the PKD, we should mention the absence of environmental pollution and the negligible amount of noise in their operation.

In our country we are using freight, passenger and freight-passenger monorails. The sphere of their use has come to include the mining and extractive industry, the production of building materials, and athletics. In Georgia there is a particular need for the PKD among the rural workers. What contribution can the development of monorails make to the republic's agriculture? We asked Sh. Ordshonikidze, the chief of Gruzglavkanatdor, to answer this question. Here is what he said:

"The establishment and development of the PKD's and their use in agriculture, especially in the nearly inaccessible hay harvesting and pasture areas, is a very necessary project of great long-range value. We have worked out and are already implementing a comprehensive program for the development of monorails for the rural areas. Accomplishment of the plans will enable us not only to increase the yield of the mountain meadowlands and hay-cutting areas (by virtue of the possibility of delivering and applying mineral fertilizers) but also to develop in the republic, according to its own modest calculations, up to 50,000 hectares of new fodder lands. In addition, it is planned to use the PKD in such agricultural sectors as tea, citrus and fruit growing. Stemming from this also are the sizable requirements which are given to the developers of the new PKD designs. This task is being addressed under the jurisdiction of our administration by its scientific research and planning institute for the special types of transport and the systems for automatic operation of them--the automatic equipment NIPI Transavtomatika. The design for freight PKD of the light-weight type--the Rikoti--has proved to be excellent."

The prospects envisioned in Gruzglavkanatdor are vast. In Georgia alone it plans to construct 250 kilometers of new cableways--the task of development of the PKD network was assigned to the republic by the 26th CPSU Congress--approved "Basic Directions for the Economic and Social Development of the USSR in the 1981-1985 Period and in the Period up to 1990." The scope of the work entailed is imposing. And to assure that the cableways developed by the Gruzglavkanatdor specialists are introduced on a really widespread scale and that they become genuine aids for the workers of the republic and the enterprises of the extraction sectors of industry, there has now come to the fore the question of mass series production of the equipment for the cableways. This is why the workers in Akhalkalaki also began recently to build a large specialized plant there.

"In short, it is the construction which today determines the development of our industry," says Sh. Ordzhonikidze. "We are completing construction of our experimental production base. We are continuing construction of an engineering and laboratory complex in Saburtalo--we will settle our administration and the NIPI Transavtomatika there. In Tbilisi they will also build a center for the training and advanced training of personnel for operation of specialized transport of the continuous type.

Gruzglavkanatdor is being built up, expanded and strengthened. It is recruiting the manpower which is needed for successful accomplishment of the truly enormous tasks which are being assigned by the 11th Five-Year Plan to this type of transport for the long-term future.

7962

CSO: 1829/248

## MISCELLANEOUS

### DEVELOPMENT OF NEW PNEUMATIC CONVEYER REPORTED

Tbilisi ZARYA VOSTOKA in Russian 5 Apr 81 p 1

[Article by staff correspondent A. Mitagvariya "Freight Travels through Tubes"]

[Text] On the threshold of the 26th CPSU Congress they celebrated a labor triumph in the city of Marneuli: they have there begun operation of an experimental industrial installation, the Lilo-2 pneumatic transportation system. Not much time at all has elapsed since it was started but it is now already possible to see all the advantages of this unique type of freight transport.

What kind of installation is this? To put in briefly, it is a metal tube with a diameter not much more than 120 centimeters, extending for 17.5 kilometers. Moving in the air flow in this conduit is a train made up of several trolleys loaded with inert materials.

All this appears simple. But it just seems simple. And it is not at all that the pneumatic transport plan worked out by the Gruzgiprovodkhoz [Georgian State Institute for the Planning of Water Management] and the specialists from the SKB Transprogress [Special Design Office for Transportation Progress] does not have counterparts or is being introduced as the first of its kind in the world. Or that it was actually a complicated project to set up this single-design installation, which connects the Marneuli ferroconcrete products plant with the Shulaverskiy quarry. In addition to all the difficulties which characterize any construction project, this one required filigree accuracy in installation of the tube and the manufacture of special technological equipment. Additional difficulties stemmed from the hydrogeological conditions and the relief of the terrain--in some places the tube crosses gullies and rivers.

Substantial difficulties were encountered enroute by the construction workers from the Pnevmotrans [Pneumatic Transport Administration] of the republic's Ministry of Land Improvement and Water Resources but their persistence and pertinacity prevailed. The whole country came to the builders' assistance and the pneumatic transport line was turned over for operation on time.

Today the L140-2 installation operates efficiently. At the central control point, which is in Marneuli at the unloading station, operator G. Mamladze skillfully supervises the movement of three loaded trains. The pneumatic diagram shows clearly the passage of the trains through each sector of the route. The forward

train approaches the unloading station and a red light goes on on the pneumatic diagram--this means that the braking gear has been switched on and the train is now slowly proceeding to the place of unloading. A belt conveyer has gone into operation. A minute has gone by and a 30-meter length of the tube, put in motion by hydraulic devices, has begun to rotate around its axis.

"Now the automatic device fixes the tube in the necessary position and the unloading begins," says E. Lominazze, the chief of the operational transport enterprise:

So it was. The hatches of the tube opened and the rubble was sent on a belt conveyer which goes directly to the plant.

"The installation makes an excellent showing in the work," continues the comrade I am interviewing, "but other problems have arisen in the work. Every tube can haul 32 tons of freight. We in just a few days fill to the brim, so to speak, the small platform of the ZZhBI [reinforced concrete and concrete products plant]. Hence it becomes necessary to operate at half, and not full, capacity. And this now when only three units of the pneumatic trains are plying the route and the number of them will only be increased three-fold in the near future.

The conversation did not take this turn by accident. In truth, both the quarry organization and the Marneuli ZZhBI were not geared for the work of the pneumatic transport. Now the situation has been corrected to some extent. Construction is being completed on a new belt conveyer which will deliver rubble directly to the railroad siding in Marneuli.

The construction of the second section of the Lilo-2 pneumatic conveyer is proceeding at steady rates. It will be extended from Marneuli to station Veli toward Tbilisi. The overall length of the pneumatic run is 40 kilometers. Having taken on stepped up socialist commitments, the construction workers have decided to turn the section over for operation ahead of schedule, by 7 November of this year.

The prospects for the Lilo-2 are impressive. And this means that this type of transport calls for the most serious attention. To develop pneumatic transport--such is the task the 26th Party Congress has assigned to the 11th Five-Year Plan.

7962

CSO: 1829/248

END



**END OF**

**FICHE**

**DATE FILMED**

June 29, 1981